Integrating Health and Social Care Systems in England – A Case of Better Care?

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Abstract

In 2013, the UK Government announced a major £3.8 billion healthcare initiative, the Better Care Fund. This funding was intended to be used within local health and care systems to drive closer integration, create new service efficiencies, support technological innovation and most importantly, improve outcomes for patients and people with care and support needs. The research described in this paper uses the lens of systems integration to investigate how health and social care delivery, through the Better Care initiative, is currently being transformed in a major UK city. An action research approach is being used to determine the key issues and challenges that need to be addressed if new models of integrated health and social care are to be successful. Early findings indicate that an integration approach, informed by systems integration models and theory, can facilitate a better understanding of the potential challenges for integrating health and social care information systems.

Keywords

Healthcare, Social Care, Information Systems, Health Information Systems, Integration, NHS

Introduction

In June 2013 the UK Government announced a major £3.8 billion initiative known as the Integration Transformation Fund, later to be renamed the Better Care Fund (Bennett and Humphries, 2014). This funding was intended to be used within local health and social care systems to drive closer integration and improve outcomes for patients and people with care

and support needs. As further details emerged, it became clear that most of the money would come from existing NHS budgets – it is not new money and this is equivalent to an average reduction in allocations to English NHS Clinical Commissioning Groups (CCGs) of around £17 million, with potential knock-on consequences for acute and community health services. One further issue around the Better Care Fund was that the government proposed to transfer nearly £2 billion of the NHS funding to social care in a bid to reduce hospital admissions, especially as a response to a worrying upward trend in acute Accident and Emergency (A&E) admissions, a growing elderly population with increased patient demand, and a lack of hospital acute care capacity. Within the UK this is not the first time that governments have attempted to develop an integrated approach to health and social care (Leutz, 1999, 2005) but previous national approaches have been less than successful. Nevertheless this new initiative appears to take little account of past history or academic theory and government is intent on leading the way through the additional funding of 'vanguard projects' which will provide good practice guidance for those organisations following on (NHS England, 2015). The research described in this paper investigates how the Better Care initiative is currently being developed in Newcastle upon Tyne (which is not a vanguard site), and aims to provide insight into the real challenges faced by organisations that have ill-defined or evolving working relationships, have different professional focus, structures and services, as well as information systems geared to their own individual needs.

The partnership of stakeholders within Newcastle upon Tyne believes that the way to better care for their citizens is through a combination of integrated care and information systems integration. This is an ambitious plan, is very technologically focused and is visualised in three stages. The first stage is referred to as '*Whole system opportunities through Data Sharing'* with two further stages of work within the plan: '*Customer relationship opportunities through a new technological platform'* and '*Individual service opportunities through existing and new technology/equipment'*. The challenge for the stakeholder partnership involves understanding the complexity of what they are proposing, the issues involved and how they might implement the plan.

The paper begins with a short overview of what the Newcastle upon Tyne Partnership developed as their Better Care strategy in order to apply for the government funding. It then considers some of the appropriate academic literature underpinning this work and the action research methodology that the researchers used to explore the integration challenges.

Recognising that this is work in progress, the paper ends with some early findings as well as discussion of the challenges facing the newly evolving local partnership and implications of this research work.

Systems integration – Generic Theory

Previous studies (Waring, 2015; Wainwright & Waring, 2004; Waring & Wainwright, 2000) have shown that 'integration' is a complex construct with no simple definition and has a variety of meanings to many different people both within health and social care and within the business environment. We have demonstrated in our previous studies how the theory has emerged over time and have proposed a framework that synthesises much of this work and views information systems integration as four interacting domains which need to be given explicit consideration when undertaking complex integration projects. These four interlinked domains comprising; **Technical, Systems, Strategic, Organisational** are shown in Figure 1.

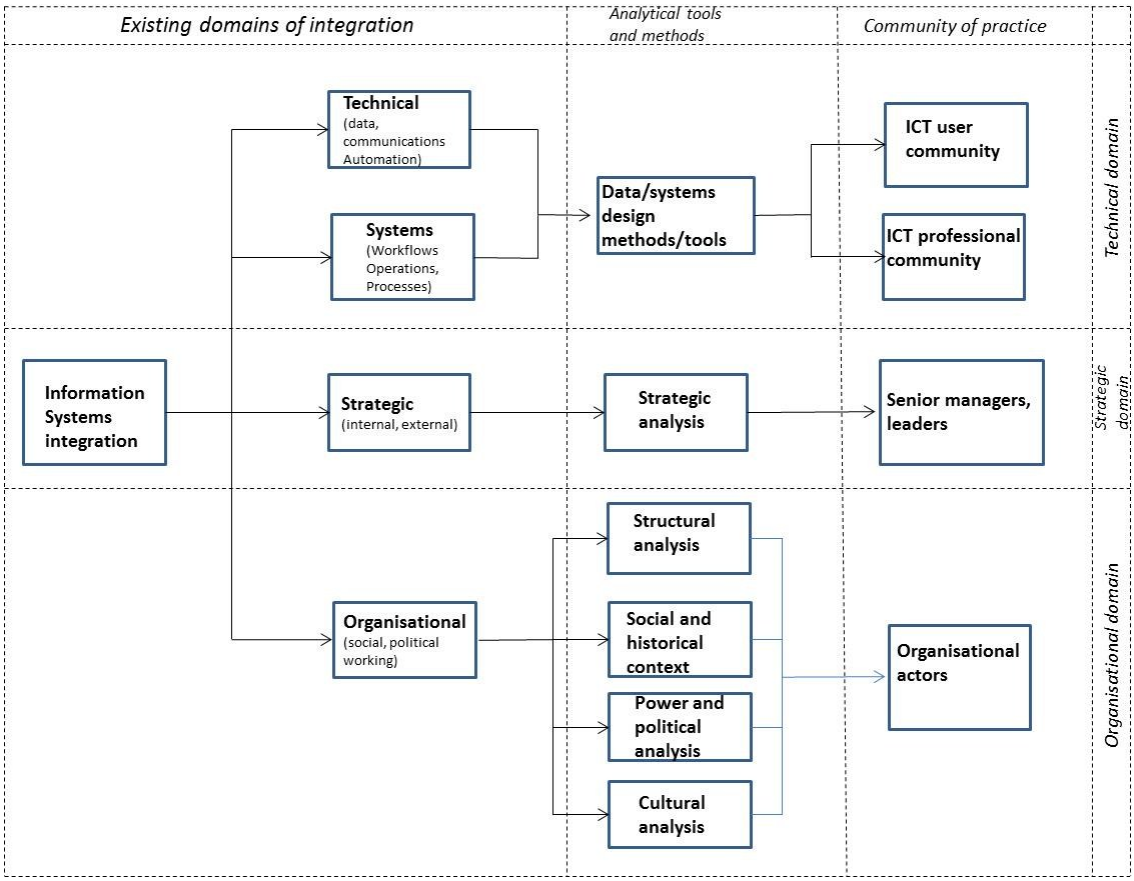

Figure 1: A framework of integration adapted from Wainwright and Waring (2004:341)

Although we do not intend to revisit the theory it is important to pull out some key issues. For example when organisations are thinking about integration it is often the ***Technical*** domain that is given prominence and in many cases making complex software and hardware artefacts communicate using appropriate technologies, protocols and techniques can become the major goal. Such developments and hype in terms of technical integration are not only problematic in their own right, due to the exploding diversity of technology and tools, but fail to recognise the organisational difficulties, which arise when functional boundaries are crossed. In order to incorporate a more complete set of factors affecting IS integration across technical and organisational boundaries we have incorporated a further three domains. Adopting a **Systems** (Checkland, 1993) view allows individuals to consider how a proposed integrated approach might affect the organisations involved. It is underpinned by general systems theory which argues that organisations are seen as complex and adaptive systems that have distinctive emergent properties. This is particularly true of integrated IS where complex interaction of technology, tasks and processes cannot be understood and dealt with in discrete bundles. Integration is also perceived as a ***Strategic*** issue and consequently any definition should have a strategic component. Strategic planning for integration is common in industry and has facilitated the adoption of fully integrated Enterprise Resource Planning (ERP) or what are now termed Enterprise Systems. The acceptance of the need to plan and 'think' strategically about large-scale integrated IS projects has occurred in parallel with the massive scale of investments now required and many IS academics argue that business and organisational strategy must be fully integrated with the organisation's IS/IT strategy (Ward and Peppard, 2002). In terms of the ***Organisational*** domain within an IS implementation we need to better understand the many issues involved. Unfortunately each implementation is unique to its context. It could be that a new or different computer system is being introduced at the level of the organisation or across organisations, sites or departments and people are being asked to work in different ways. New policies may be brought in, managers may lose their power base and staff may be made redundant as technology is used to share information and do their work. There are numerous permutations of what might take place and this is illustrative of what is continuing to take place in the UK public sector (Faulkner et al., 1987; Willcocks and Marks, 1989; Thomas et al.,1995; Bentley, 2002; Waring and Wainwright, 2002 and Waring, 2015). From the perspective of the literature the organisational domain covers structure, culture, power and politics as well as organisational context and history. All appear to be relevant and cannot be ignored.

When exploring Systems integration further it is clear that each domain in Figure 1 has its own tools, techniques and methodologies for analysing the integration process. However most have been developed without reference to the related domains and for a specific community of practice. There is little commonality between these communities and their practices including the epistemological underpinning that prompted their development. This becomes a huge challenge when working in the integration environment as expertise is dispersed and may increase tensions when trying to develop integrated solutions to real world problems. This is particularly relevant to the UK NHS, and the integration of health and social services.

Integrating Health and Social Services

There are many academic studies and research reports (Shaw et al, 2011; Rosen et al, 2011; Kodner, 2009; Strandberg-Larsen & Krasnik, 2009; Robertson, 2011; Cameron et al, 2012) focusing on the issues, challenges, benefits and strategies for integration within the NHS and across health and social care. It is not the purpose of this paper to both critique and discuss the merits of that large body of work as much of it relates to medical/clinical issues and care pathways. For the purposes of this paper however, our research focuses on two studies that demonstrate the holistic systems thinking approach that is advocated by a growing number of researchers and which we believe is highly relevant and has the potential to provide greater theoretical insight into to the Better Care and integration programme.

The first study (Ramsey et al., 2009) reviews the evidence for vertical integration across health care and describes its impact upon organisational structures, on how services are provided and on such outcomes as cost, clinical outcomes and patient experience. They also outline conditions that support successful integration. Vertical integration describes a situation where different components of a supply chain are brought together in a single organisation. In health care there are two main types of vertical integration:

- Where agencies involved at different stages of the care pathway are part of a single organisation
- Where payer and provider agencies are part of a single organisation

Ramsey et al. (2009:4) propose a framework (Figure 2) which they believe is essential to the success of vertical integration and provide insight into their definition of ***organisational integration*** "*… is where organisations are brought together formally by mergers or through 'collectives' and/or virtually through coordinated provider networks or via contracts between separate organisations brokered by a purchaser*."

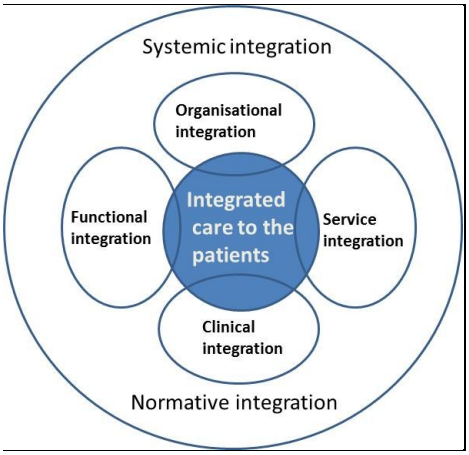

Figure 2. Typologies of integrated care (Ramsey et al., 2009:4)

As they see it ***functional integration*** is where non-clinical support and back-office functions are integrated e.g. electronic patient records. ***Service integration*** refers to situations where different clinical services are integrated at an organisational level, such as teams of multi-disciplinary professionals. ***Clinical integration*** is believed to be where care, by professionals and providers, is integrated into a single or coherent process within and/or across professions, such as through the use of shared guidelines and protocols. Finally Ramsey et al. (2009) distinguish between normative integration where there is an ethos of shared values and commitment to coordinating work which enables trust and collaboration in delivering healthcare; systemic integration is where there is a coherence of rules and policies at all organisational levels. This is sometimes termed an 'integrated delivery system'. They recognise within their work that the evidence base is limited and much more work needs to be done but argue that the framework is based on their interpretation of data both within the US and UK.

An alternative approach to integrating health and social services is provided by Leutz (1999; 2005) who recognises that integration could, if done well, address cross system care problems, including poor coordination of services and benefits, cost shifting, and frustration

for users in accessing services. His initial work is based on a substantial review of the pertinent US and UK literature and concludes that there are five 'laws of integration':

1. *You can integrate all of the services for some of the people, some of the services for all of the people, but you cannot integrate all of the services for all of the people.*
2. *Integration costs before it pays*
3. *Your integration is my fragmentation*
4. *You cannot integrate a square peg and a round hole.*
5. *The one who integrates calls the tune*

Table 1 illustrates the 1st law by describing three levels of integration: linkage, coordination and full integration of services and is designed to answer the question of how the acute care and social care (the 'other side') work together. The 2nd law highlights an issue when organisations contend that integration will save money. Leutz (1999; 2005) argues that savings from integration are hopes whereas costs cannot be avoided if success is to be achieved. There is no easy answer to this and it depends on the situation. However there are at least three types of costs to be considered: staff and support systems, services and start-up. The 3rd law provides insight into what is driving interest in integration. Asking professionals and managers to integrate their services – or even co-operate- not only creates costs (see 2nd law) but also requires them to expand their knowledge, perspectives, and interests. Life is much simpler if all they need to worry about is their own service.

Law 4 highlights the problematic nature between acute and long-term care that has frustrated integration efforts for many years. First of all, there are differences between how clinical and social service staff approach their work: social service assessments of users tend to be characterised by description, eligibility criteria, negotiation, social support systems and long-term goals, whereas health assessments tend to be characterised by diagnosis, clinical judgement, expert advice, individual health and short-term goals. Second long-term care benefits are granted only to those who are financially eligible and this requires an integrated system to offer universal access based on need for one set of its services while denying access to many who need another set of services. Third, long-term care benefits, particularly for home-based and community-based services, are chronically underfunded both in the US and UK and this is reflected in waiting lists, individual spending caps, geographic differences and service exclusions. If this is carried over to an integrated system then there will be a need to adopt or develop its own system of rationing.

Law 5 illustrates that the power base in an integration project is with the drivers of integration and in the case of the UK this is with government and local service providers but could be with frontline staff. Leutz (1999) argues that joint commissioning of services appears to be a way forward in the UK and the key to that success is to recruit commissioners for whom integrated services for a population group is a preeminent issue. Nevertheless he cautions that without attention to the needs of service users and their carers it will just become another cost-cutting exercise. Although recognising that his 'laws' have no scientific justification and that social science lack the tools to reveal and predict processes and outcomes in complex areas like health, long-term care, education and other related systems he does make some recommendations to potential integrators: service users, carers and community service providers should be involved in planning and oversight of whatever system is introduced; develop systems to integrate, coordinate and link services for persons with disabilities; clarify borders between medical and other systems.

Operations	**Linkage**	**Co-ordination**	**Full-integration**
Screening	Screen or survey the populations to identify emergent needs	Screen flow at key points (e.g. hospital discharge) to find those who need special attention.	Not important except to receive good referrals (changing needs identified and met through team members)
Clinical practice	Understand and respond to special needs	Know about and use key workers (e.g. discharge planners) to link	Multidisciplinary teams manage all care.
Transitions/service delivery	Refer and follow up	Smooth the transitions between settings, coverage and responsibility	Control or directly provide care in all key settings
Information	Provide when asked; ask when needed	Define and provide items/reports routinely in both directions.	Use a common record as part of daily joint practice
Case management	None	Case managers and linkage staff.	Teams or 'super' case managers all care.
Finance	Understand who pays for	Decide who pays for	Pool funds to purchase

	each service	what in specific cases and by developed guidelines	from both sides and new services
Benefits	Understand and follow eligibility and coverage rules.	Manage benefits to maximise efficiency and coverage	Merge benefits: change and redefine eligibility
Need dimensions:			
Severity	Mild/moderate	Moderate/severe	Moderate/severe
Stability	Stable	Stable	Unstable
Duration	Short to long term	Short to long term	Long term or terminal
Urgency	Routine/non-urgent	Most routine	Frequent urgency
Scope of services	Narrow-moderate	Moderate-broad	Broad
Self-direction	Self-directed or strong informal.	Varied levels of self-direction and informal.	May accommodate weak self-direction and informal.

Table 1: Levels of integration: Working with the 'other side' (adapted from Leutz, 1999: 86-87)

In this section we have briefly considered some pertinent literature relating to both generic and context specific integration that is relevant to the Newcastle Better Care (integrated health and social care) project and has informed our approach to this study. In the next section we provide context to the issues and describe how the research has been carried out to date.

Methodology

From the perspective of health and social care, operations management and IS both Westbrook (1995) and Coughlan and Coghlan (2002) have argued that Action Research (AR) is an appropriate approach to research as it deals with real world problems that are often relevant to many other organisations and this has been recognised by the growth of AR studies within the field (e.g. Baker and Jayaraman, 2012; Naslund, 2002; Waring and Wainwright, 2002; Waring and Alexander, 2015).

A wide range of approaches to AR have emerged over time on how it should be conducted (see overviews by Coghlin and Brannick (2010); French(2009); Greenwood and Levin (2007); Flood and Romm (1996); Moggridge and Reason(1996); Reason(1994); Dash(1999)). Denscombe (1998), Coughlan and Coghlan (2002) and Kember (2000) consider it important that AR leads to practical outcomes as well as theory development thus leading to a closer link between the two. Achievement of change, not just knowledge acquisition, as well as a rigorous process of data generation and analysis, is essential in AR. O'Leary (2005:190) describes action researchers as working on '*real-world problems'* at the '*intersection*' of the production of knowledge and a '*systematic approach to continuous improvement'* which she argues is part of management.

The Approach to Action Research Adopted in this Study

In terms of a methodological approach the research team within this study adopted the model utilised by Coghlan and Brannick (2010) which like other variants of AR is distinguished by a pre-step and four stages as shown in Figure 3. The pre-step is an important function in defining the context and purpose of the research (Avison et al.,1999). 'Diagnosing' is a collaborative act and seeks to identify provisional issues. 'Planning action' follows on from the diagnosis and is consistent with it. Taking action implements the planned interventions and 'evaluating action' examines outcomes intended or otherwise and links in to the next cycle of action research.

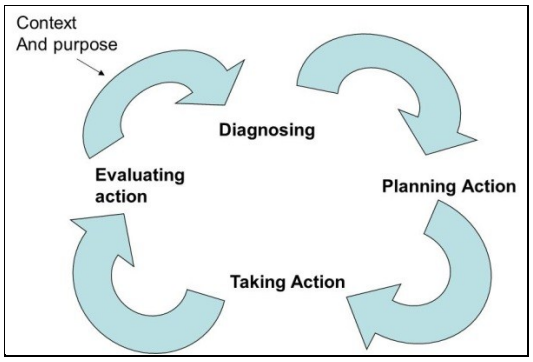

Figure 3: The Action Research Framework used in this research

The study has been designed around three AR cycles (Figure 4) and to date we have completed two and have moved into Cycle 3. It has taken approximately one year to get to this point. Cycle 1 was undertaken to get commitment to the Better Care project from stakeholders across health and social care. Cycle 2 involved information gathering within

Newcastle health and social care to establish what IT is in use to support service user care across the various organisations. This referenced the academic literature to support the research. Cycle 3, which is underway aims to identify pilot projects that can be developed, run for a period of time and evaluated to establish whether they can be scaled up to provide better care and financial savings for the major services.

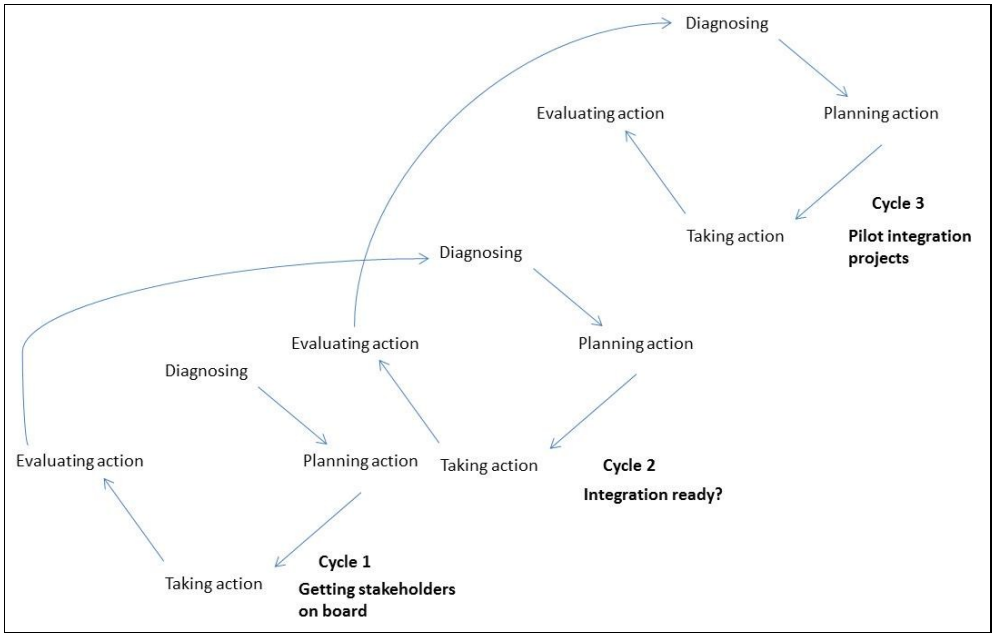

Figure 4: The cycles of AR undertaken in this study

Recognising the need to engage stakeholders in the process the research team determined that the approach taken would be highly participative and congruent with the values of the health and social care services (Stringer,1999; Waring and Wainwright, 2002). In adopting a participative approach to AR the research team actively and ethically encouraged the various stakeholders to be participants in the project. The research team were also keen to engage other stakeholders and this was reflected in the data generating methods used in the various cycles of the AR as shown in Table 2.

Coghlan and Brannock (2010) argue that it is more appropriate to discuss data generation rather than data collection because AR data exists through engagement with others and attempts to collect data are themselves interventions.

Cycle	**Data Generation Methods**
Getting stakeholders on board (July 2014-November, 2014)	Document analysis e.g. strategies, minutes of meetings, emails,

	Interviews with service staff (4) Half day interactive workshop with 32 participants Project meetings
Integration Ready? (November 2014-May 2015)	Document analysis e.g. hospital/ social services strategy, minutes of meetings, emails, performance data. Interviews with stakeholders (26) Visits to a variety of organisations/departments Workshop/feedback half day (16 Directors and Senior Managers from stakeholder organisations)
Pilot integration projects (May 2015 onwards)	Meetings with senior team Plans for integration Criteria for evaluation Observations Feedback from frontline staff

Table 2: Data Generation Methods

In terms of the robustness of the approach Reason and Bradbury (2001) contend that AR should not be judged by the criteria of positivist science but requires its own criteria. Good quality AR should be explicit in developing a praxis of relational participation, should have practical outcomes, should engage in substantial work and should result in significant change. Rigour in AR refers to how data are generated, gathered, explored and evaluated, how events are questioned and interpreted within the AR cycles (Reason, 2006).

Coughlan and Coghlan (2002) argue that to maintain validity action researchers must consciously and deliberately enact the action research cycles testing their own assumptions and subjecting those assumptions to public scrutiny. The principal threat to validity for action researchers engaged in this type of research is the possible lack of impartiality on the part of the researcher and bias brought into the action research narrative.

Data Generation and Enactment of the AR Cycles

Before the AR cycles were enacted a participant AR team was assembled and this consisted of a project manager (PM1), two senior managers from social services (SM1 and SM2) and both of the authors of this paper (AU). Although there were many stakeholders involved in

the project these individuals were constant members of the project. It must also be pointed out that the project manager (PM1) moved to another post in September 2014 and was replaced by PM2 who is still with the project.

Cycle 1- Getting Stakeholders on Board

The initial problem which began this Better Care project was one that was much more generic. Newcastle City Council (NCC) was one of number of organisations that took part in a 'sand pit' event at the university in March 2014 which explored mechanisms by which the university could develop better research and consultancy links with partner companies and institutions. These events often prove fruitless but in this case the authors struck up a good rapport with SM1, someone they had never met before.

From our experience developing research relationships and conducting applied research needs a degree of trust between the organisation who want the work done and the individuals who will do the work. In our case we met with SM1 and then SM1 and PM1 over a period of weeks to discuss a major project that NCC were hoping to implement – the Better Care Fund (BCF) project. SM1 and colleagues had placed a funding bid with the UK government to address integration of services and had been awarded a substantial amount of money.

Unfortunately the deadline for the funding bid had mitigated the possibility of extensive consultation with stakeholders in both health and social care and many had not been aware that the bid was being submitted. In terms of ***diagnosis*** it was evident from our meetings that to achieve the proposed outcomes for the project there needed to be more stakeholder engagement and 'buy in'. The authors of this paper suggested a number of ways forward that included a stakeholder workshop to promote participation and support for the BCF. This was accepted as a useful step forward and during May/June 2014 the authors worked with SM1 and PM1 to ***plan*** the workshop and its content. PM1 provided names of suitable stakeholders in a variety of health and social service organisations and they were invited. The format of the workshop was such that it gave all who attended an opportunity to speak and voice their thoughts and concerns. The authors had experience of running these type of events and were confident that four hours of interactive, facilitated activities would work well.

The workshop (***take action***) took place on 17th July, 2014 and 21 people attended. They had been sent a copy of the BCF proposal in advance of the workshop and had been told that the

purpose of the meeting was to try and find common ground and buy in for integration of services. The workshop was introduced by the authors and SM1 and then they were shown a short video clip which outlined the complexity of the NHS and its component organisations. This was to demonstrate to non-NHS participants the challenge lying ahead. Following that we sub-divided the group into four mixed service 'breakout' tables each facilitated by one of the AR team. They were asked to consider:

- ***Systems and Technology*** *– Where is integration working; systems currently being used?*
- ***Processes*** *– workflows, scheduling, care pathways, governance; good practice?*
- ***People****- culture, professional practice; the citizen; WIIFM?*
- ***Challenges*** *– what are the barriers, enablers etc.?*

Discussions were recorded by the facilitators on 'table top' paper but all participants were able to write and record their views on it if they wished. The group came back together for a feedback session at the end and it was clear that the workshop had surprised some, enthused others and challenged a few. We provided them with some research that had been done in Newcastle back in 2000 (Buehring and Waring, 2000) which had also looked at integration of services and showed them some views of frontline staff who were interviewed at that time. This left no-one in any doubt that what was being proposed was far from trivial. After the workshop the authors collected up the notes of discussions from each table and de-briefed the facilitators and one week later a report was produced and sent to SM1 and PM1. The report highlighted:

That it was clear that there was no consistency when discussing systems and technology. All of the four tables appeared to focus on different aspects and sometimes overlapped into other areas we were considering. Nevertheless a myriad of systems and technology were identified by the four groups. There was a sense of aspiration for better knowledge about what exists in terms of systems and technology across the region. An improved understanding of what is going on elsewhere would make it easier to harness opportunities for integration. In terms of processes that work or good practice all tables had examples of what was working in their organisation and service and some even knew about other projects taking place in the UK. Again the need for improved knowledge about the good practice elsewhere in the region was acknowledged as an important enabler for integrated working. When considering people involved in integration there was a mixed approach to populating this category. Whilst most

of the tables focussed on identifying the groups or individuals who might be involved in integration at least one table examined the people related issues rather than the people themselves. One thing that was clear is that this group of senior managers/directors are at too high a level in their organisation for this type of detail and what may be required by the partnership is a 'boundary spanner' or group of 'boundary spanners' (Lindgren et al, 2008) to facilitate the understanding of what goes on at the citizen/ service interface. Identifying the challenges facing the BCF project in Newcastle resulted in the widest range of responses of all the four categories: governance around information; the variety of IT platforms across the services; lack of financial incentives to integrate; service resistance to name but a few.

An ***evaluation*** of the action/workshop by the authors and SM1 and PM1 took place in early September 2014. It was agreed that the workshop had been a success and we felt that a number of positive developments had emerged. The authors had been looking at some of the theory which might inform further research and made some suggestions as to the way forward. One included exploring and mapping the systems that are present in the stakeholder organisations in order to inform an integration strategy. We also suggested exploring some of the processes involved in both health and social care. We were asked to put together a research proposal for a 2nd cycle of AR and that was accepted by NCC in November 2014.

Cycle 2- Integration Ready?

The BCF project as proposed by NCC and outlined earlier in the paper had three stages:

- *Whole system opportunities through Data Sharing.*
- *Customer relationship opportunities through a new technological platform*
- *Individual service opportunities through existing and new technology/equipment' Implications*

Going into Cycle 2 the AR team decided that exploring '*Whole system opportunities through Data Sharing' w*ould be the place to start. The lack of a whole systems overview of the technology and systems within Newcastle health and social care meant that it was difficult to see where there were opportunities to share data. Thus the ***diagnosis*** was the lack of understanding of the stakeholders in the project and it was agreed that this needed to be rectified if any progress was to be made. Thus the team ***planned the action*** that was to be taken:

1. *Developing an interview schedule to elicit relevant information from NCC, Trust and Care Commissioning Group stakeholders*
2. *Interviewing the stakeholders present at the initial workshop. Approximately 20 individuals.*
3. *Transcribing and analysing the interviews*
4. *Mapping the systems identified using appropriate modelling software*
5. *Writing a report for the partnership.*
6. *Presenting findings of the research to stakeholders.*

The work was to be done between December 2014 and May 2015 and would be carried out by the authors. The difficulty with carrying out the interviews was that we were unsure as to whether the interviewees would be able to provide the information we required.

The above plan of ***action*** was undertaken and completed but in terms of the interviews the authors used a snowballing technique to reach stakeholders who may have not been present at the workshop in July 2014 but who had vital information for the BCF project. We interviewed 26 people in total, many of whom had been at the July workshop, and included: a GPs, a GP practice manager, clinical directors, directors of commissioning for the CCG and also Social Services, senior IT managers across 3 stakeholder organisations and vendor suppliers, senior business and strategic managers, community nurses, social workers and a director of care services. These, we believed, dealt with the day to day business of care and knew what was taking place on the frontline. The interviews took between 1-2 hrs and were structured around the key integration themes identified in the literature review. It was clear that many interviewees did not have insight into all areas and there was a variety of skills with no one individual with a whole system's perspective. There were some challenges along the way as the culture differences between health and social care staff manifested themselves in the way individuals responded to the our interviews. It was also evident when talking to frontline staff that a number thought that integration of services was not appropriate for them. In total we had over 500,000 words of interview transcripts which we thematically analysed. We also did some example process mapping of the services as well as developing overview maps coupled with a narrative description of the IT used across health and social care in Newcastle. Recognising the potential audience for this report, many of whom were not IT staff or familiar with process maps, we also developed other graphical representations of the status of IT in the city. Figure 5 demonstrates the lack of integration across primary and secondary healthcare as well as no integration into social care.

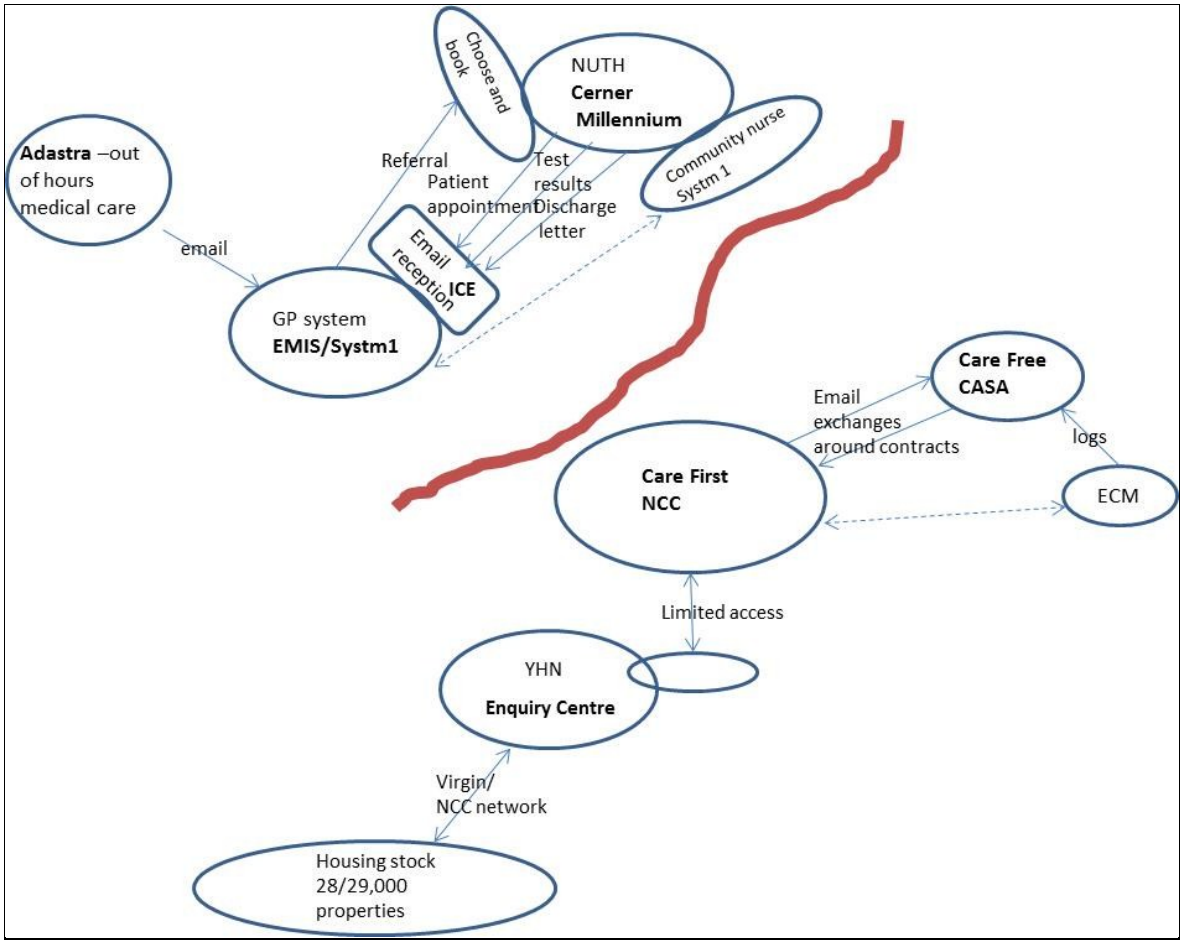

Figure 5: IT systems in Newcastle showing lack of integration

These maps and diagrams were then combined in a report and were presented to the AR team at the end of April 2015. After some editing was presented at a feedback workshop on 11th May, with copies then released for general comment to all participant stakeholders. At this workshop the authors provided the stakeholders with the salient points and gave them an opportunity to comment and to consider the proposed future direction of the project. The authors suggested that based on the research and the work done during the interviews that it was essential to develop a '***health and social care innovation'*** hub which would allow:

- *Exploration of current best practice from across the UK in co-ordinated care.*
- *Consideration of potential innovations e.g. DALLAS, telecare, telehealth*
- *Creation of a local evidence base for health and social care integration.*
- *The Hub could act as a conduit for funding bids*
- *Discussion with IT vendors from across health and social care to explore how technology can support this work.*

- *Involvement of public participation e.g. a similar model to the 'Gateshead Integration event' held in December, 2014 (a public meeting attended by over 100 citizens, and health and care professionals to discuss integrated care services).*
- *Have meaningful cross-organisational discussions and creation of policy on information governance for cross- sector working.*

The stakeholders present at the workshop were asked to further reflect on the findings, group discussions and report. Following this, an ***evaluation*** meeting was held on 12th June 2015 to assess the value of the research and to determine the next cycle of AR. This meeting was attended by key stakeholders from NCC where the director of the Better Care project described progress on the formation of a new Strategic Integration Board that had been set up to include responsible owners/accountable officers from NCC, Newcastle Gateshead CCG, NuTH and Community Nursing. An outcome of this new decision making body were plans to develop a Locality Pilot (40-60K population) involving a cluster of GP practices where new forms of integrated working and care pathways would be piloted. In addition, the Gateshead and Newcastle Informatics working groups had been amalgamated with an new Head of Informatics responsible for aligning IT and informatics strategy with the stakeholder organisations and the Locality pilot.

Cycle 3 Pilot Integration Projects

As a result of the AR meeting, the research team are proposing a next phase of research and series of AR cycles/projects to:

- *Present a further proposal to build on the AR cycles to date and work with the pilot initiatives in the new Locality Project to produce appropriate measures and metrics for benefits realisation of the integrated health and care projects involving technological innovations.*
- *Provide potential modelling (business process, soft systems and simulation) expertise and tools support for the strategic planning and operational delivery of new transformational services, exploring new scenarios for joined up health and social care, with a focus on telehealth and telecare.*
- *Initiate a 'bottom up' process to create an innovation/integration hub by working at GP practice level and a social housing provider – to explore alternative uses of existing technological broadband infrastructure, user devices, telehealthcare and assistive technologies.*

Discussion

Systems Integration – Health and Social Care

The generic view of systems integration (Wainwright and Waring, 2004), comprising four domains, **Technical, Systems, Strategic, and Organisational** Figure 1, lends itself to, and can be applied within, a more context specific interpretation, especially with respect to healthcare integration. Ramsey et al (2009) depict vertical integration within a health and care environment as comprising a typology : **Organisational, Functional, Clinical, and Service**. Although depicted as either systemic or normative types of integration, Figure 2, this model fits most closely within the strategic and organisational domains as illustrated in Figure 1 where normative relates more to the 'softer' cultural, trust and shared value, factors and systemic to the 'harder' structures related to rules, policies, management and control. Similarly Leutz (1999) depicts integration in healthcare as dependent on 5 axioms or laws, which can also be set against 3 main integration levels: **Linkage, Coordination and Full Integration**, Table 1. This represents a set of maturity levels for health and social care integration and is set against a context of pragmatism in terms of how the laws might guide any planned policy or strategy towards full integration. Again, this also depicts a strategic view and mainly represents the strategy and organisational domains.

These 3 models, used in combination, help explain complex healthcare, health and social care integration situations such as the planned Newcastle Better Care initiative. An analysis of the action research cycles, current and planned, shows that each of the four domains relating to systems, technical, strategic and organisational must be recognized as mutually constitutive and important for any realistic planned integration comprising the multiple agencies, stakeholder and professional groups. Existing work to date (Ramsey et al, 2009; Leutz, 1999, 2005) recognises this but focuses mostly on organisational and strategic issues. There is little emphasis on taking a holistic systems view, or recognising the complexity of technical infrastructure and applications interoperability, as opposed to focusing on the need for information sharing within mutually agreed information governance arrangements. Additionally, there seems a limited emphasis on more detailed cultural, political and power analysis as these often represent the main barrier to inter-agency working and joint strategic commissioning. One party (both in terms of professional culture and also technical infrastructure) tends to dominate, which is the traditional medical/clinical model represented

by the acute Hospital Trust sector. In other sectors such as manufacturing, retail or finance, the majority of integration research exposes the systems and technology as more dominant themes. Modern healthcare strategy and planning, and especially current UK policy and planning, assumes that technology and systems will comprise less complex issues than those relating to the strategic and transformational redesign of multi-agency services, integration of clinical pathways and new forms of professional working. However, in this case, no domain is subservient to another; each is of equal importance where the risk to eventual implementation success is that a critical domain is ignored or not provided with enough requisite resources.

In the case of the Newcastle Better Care initiative, there are many complex issues concerning systems and technical interoperability. There is no realistic integration between NHS health and Local Authority IT applications, and even within GP practices there is a fairly even split between two competing GP IT applications – with little vendor cooperation. At the systems level, there is much work to do in terms of information governance, policy and practice, privacy and information sharing agreements. Ownership of the patient/client data is a major issue and it seems that the patient or client has little or no control or voice over this. At the strategy level, there are many competing power and political interests which are difficult to reconcile due to financial and budgetary structures, constraints and incentives. The Better Care fund of approximately £20m for Newcastle is contested between the CCG, the Local Authority and the Hospital Trust. Jointly commissioned services and integrated working practices will be critical to the successful delivery of this project, but each organisation has its own Strategic Planning Boards, plans and priorities for operational delivery. Finally, the organisational domain is also critical to any integration agenda. It has long been recognised that there are major cultural barriers to integrated working due to professional traditions, hierarchy and significant cultural difference between health and social care professionals. In Newcastle, the Hospital Trust is seen to represent the dominant budgetary and clinical power base, where a medical/clinical model of interventionist healthcare is seen as having priority over preventative, public health and long term social care. Resources therefore flow more often into the Trust and the Community Nursing Directorates than into the Local Authority, Social Care and other Care Providers, including Social Housing.

Conclusions

This is the first study of its kind on the Better Care strategy which is being rapidly rolled out across England in 2015. Important insights are already being gained in the first phases of an action research cycle concerning the problems, issues and challenges for joint working between health and social care. A particular focus relates to the complex nature of professional groups working across traditional health and social care organisations. This also highlights the detailed nature of joint strategic commissioning of health and social care and the need for interoperability and integration of information systems to supply relevant data and information in both a routine and bespoke manner. Information governance, in the context of traditional professional autonomy, cultures and organisational structures within the NHS and also Local Authorities is being seen as a significant challenge and barrier to effective data sharing. Stakeholders interviewed in this project to date are pro-active and positive about the need for transformational change and new working practices enabled by innovative new technologies such as telehealth, telecare, collaborative portals and business intelligence solutions. Findings to date however, indicate that such developments are still in their infancy with best practice still to be identified. Further phases of this project will aim to develop the Action Research model to co-produce new pilot projects for integrative working; a particular aim being to improve care of the elderly and citizens with long term chronic conditions.

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